

ABSTRACT

A method for producing a steel ingot, which comprises an Mg oxide forming step of preparing a molten steel containing Mg in an amount sufficient for the molten steel to have an oxide composition having MgO as a primary component and a dissociation step of keeping the pressure of the atmosphere around the molten steel to be lower than that in said Mg oxide forming step, to thereby dissociate MgO to Mg and oxygen and reduce the content of Mg in the steel to 50% or less of that in the Mg oxide forming step through the diffusion thereof into a gas phase; and a preferred method further comprising a solidifying step, which comprises an Mg oxide forming step of preparing a first molten steel containing Mg in an amount sufficient for the molten steel to have an oxide composition having MgO as a primary component, a step of solidifying the molten steel, and a dissociation step of melting the resultant solid again under a pressure of an atmosphere lower than that in the case of the first molten steel, to thereby dissociate MgO to Mg and oxygen and reduce the content of Mg in the steel to 50% or less of that in the above solid before re-melting through the diffusion thereof into a gas phase.